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### **Abstract of the Disclosure**

This invention provides a duplex comprising an oligonucleotide primer and a template, wherein the primer is coupled chemically to a chromophore or fluorophore so as to allow chain extension by a polymerase. In one embodiment, the primer is extended by a polymerase to generate the complement of the template. In a further embodiment, the extended primer is separated from the template for use in a number of methods, including sequencing reactions. Methods of generating these compositions of matter are further provided.

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